WHAT IS CLAIMED IS:

1.   A method for solving a supply chain planning problem, comprising the steps of:

dividing the supply chain planning problem into a plurality of sub-problems;

forming a plurality of sub-problem partitions, each of said sub-problem partitions including a plurality of related items and associated with a respective sub-problem;

loading data into a plurality of database partitions, said data associated with said plurality of related items, and each of said database partitions associated with a respective one of each of said sub-problem partitions; and

solving each of said plurality of said sub-problems.

2.   The method of Claim 1, further comprising the steps of:

forming a plurality of clusters, each of said clusters including said plurality of related items; and

forming said plurality of sub-problem partitions from said plurality of clusters.

3.   The method of Claim 1, wherein the number of sub-problems and database partitions is equal to three.

4.   The method of Claim 1, wherein said plurality of related items are related by one or more pre-defined relationship rules.

5.   The method of Claim 2, wherein the step of forming said plurality of said clusters further comprises a step of assigning a CLUSTER_ID to each item of said plurality of related items.

6.   The method of Claim 2, wherein the step of forming a plurality of sub-problem partitions from said plurality of clusters further comprises a step of sizing said sub-problem partitions as close to equal as possible.

7.   The method of Claim 1, wherein the step of solving each of said plurality of said sub-problems further comprises a step of solving said plurality of sub-problems in parallel.

8.   The method of Claim 1, wherein said database partitions comprise a distributed database.

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9.   A method for solving a supply chain planning problem, comprising the steps of:

storing data associated with at least one new item in a temporary database location;

5   forming at least one cluster, said at least one cluster including said data associated with said at least one item;

merging said at least one cluster with at least one cluster associated with at least one sub-problem

10   partition;

loading said data into at least one database partition, said at least one database partition associated with said at least one sub-problem partition; and

15   solving said at least one sub-problem.

10. A system for solving a supply chain planning problem, comprising:

a database, said database including a plurality of partitions, each partition of said plurality of partitions associated with a respective sub-problem of said supply chain planning problem; and

a plurality of processors, each processor of said plurality of processors associated with a respective partition of said plurality of partitions, said plurality of processors being collectively operable to:

form a plurality of sub-problem partitions, each of said sub-problem partitions including a plurality of related items and associated with a respective sub-problem;

load data into a plurality of database partitions, said data associated with said plurality of related items, and each of said database partitions associated with a respective one of each of said sub-problem partitions; and

solve said plurality of said sub-problems.

11. The system of Claim 10, said plurality of processors further being collectively operable to:

form a plurality of clusters, each of said clusters including said plurality of related items; and

form said plurality of sub-problem partitions from said plurality of clusters.

12. The system of Claim 10, wherein the number of sub-problems and database partitions is equal to three.

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13.   The system of Claim 10, wherein said plurality of related items are related by one or more pre-defined relationship rules.

5   14.   The system of Claim 11, wherein each of said plurality of processors is further operable to:

assign a CLUSTER_ID to each item of said plurality of related items.

10   15.   The system of Claim 10, wherein each of said plurality of processors is further operable to:

size said sub-problem partitions as close to equal as possible.

15   16.   The system of Claim 10, wherein each of said plurality of processors is further operable to:

solve said plurality of sub-problems in parallel.

17.   The system of Claim 10, wherein said database

20   partitions comprise a distributed database.

18.   A system for solving a supply chain planning problem, comprising:

a database, said database comprising a plurality of partitions and a temporary storage location, each partition of said plurality of partitions associated with a respective sub-problem of said supply chain planning problem; and

a plurality of processors, each processor of said plurality of processors associated with a respective partition of said plurality of partitions, said plurality of processors being collectively operable to:

store data associated with at least one new item in the temporary database location;

form at least one cluster, said at least one cluster including said data associated with said at least one item;

merge said at least one cluster with at least one cluster associated with at least one sub-problem partition;

load said data into at least one database partition, said at least one database partition associated with said at least one sub-problem partition; and

solve said at least one sub-problem.

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19. Software for solving a supply chain planning problem, the software being embodied in computer-readable media and when executed operable to:

    divide the supply chain planning problem into a plurality of sub-problems;

    form a plurality of sub-problem partitions, each of said sub-problem partitions including a plurality of related items and associated with a respective sub-problem;

    load data into a plurality of database partitions, said data associated with said plurality of related items, and each of said database partitions associated with a respective one of each of said sub-problem partitions; and

    solve each of said plurality of said sub-problems.

20. The software of Claim 19, when executed further operable to:

    form a plurality of clusters, each of said clusters including said plurality of related items; and

    form said plurality of sub-problem partitions from said plurality of clusters.

21. The software of Claim 19, wherein the number of sub-problems and database partitions is equal to three.

22. The software of Claim 19, wherein said plurality of related items are related by one or more pre-defined relationship rules.

23. The software of Claim 20, wherein forming said plurality of said clusters further comprises assigning a CLUSTER_ID to each item of said plurality of related items.

24. The software of Claim 20, wherein forming a plurality of sub-problem partitions from said plurality of clusters further comprises sizing said sub-problem partitions as close to equal as possible.

25. The software of Claim 19, wherein solving each of said plurality of said sub-problems further comprises solving said plurality of sub-problems in parallel.

26. The software of Claim 19, wherein said database partitions comprise a distributed database.

27. Software for solving a supply chain planning problem, the software being embodied in computer-readable media and when executed operable to:

store data associated with at least one new item in a temporary database location;

form at least one cluster, said at least one cluster including said data associated with said at least one item;

merge said at least one cluster with at least one cluster associated with at least one sub-problem partition;

load said data into at least one database partition, said at least one database partition associated with said at least one sub-problem partition; and

solve said at least one sub-problem.